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American Cinematographer

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FILM TRUTH AND PROSPERITY IN ADVERTISING
By Herbert S. Houston

JACKSON J. ROSE, A. S. C., PICTURIZES FANTASTIC INVENTION

THE STILLS PROBLEM SOLVED
By H. Gordon Coward

HEREFORD TYNES COWLING, A. S. C., RETURNS TO U. S. A.

PUBLISHED IN HOLLYWOOD CALIFORNIA

Releases

October 26, 1924 to November 24, 1924

TITLE	PHOTOGRAPHED BY
Flattery	Harry Perry and King D. Gray members **A. S. C.**
The Great Diamond Mystery	Not Credited
Christine of the Hungry Heart	Henry Sharp, member **A. S. C.**
The Battling Orioles	Floyd Jackman, member **A. S. C.** and George Stevens
The Story Without A Name	Hal Rosson
The Virgin	Roland Price, Edgar Lyons and Paul Allen
Darwin Was Right	J. Robert Turner, member **A. S. C.**
The Only Woman	Gaetano Gaudio, member **A. S. C.**
In Every Woman's Life	Arthur L. Todd
Manhattan	Hal Rosson
The Snob	Andre Barlatier
Hot Water	Walter Lundin, member **A. S. C.**
He Who Gets Slapped	Milton Moore
Is Love Everything?	Walter Arthur and Philip Armand
Turned	Ernest Miller
This Woman	H. Lyman Broening, member **A. S. C.**
Worldly Goods	Bert Glennon, member **A. S. C.**
The Tornado	John Stumar, member **A. S. C.**
The Garden of Weeds	Karl Brown, member **A. S. C.**
The Silent Accuser	Charles Dreyer
The Border Legion	Alvin Wyckoff
The Torrent	Roland Price, Edgar Lyons and Paul Allen
Robes of Sin	Ross Fisher, member **A. S. C.**
Madonna of the Streets	Robert B. Kurrle, member **A. S. C.**
White Man	Karl Struss
Thundering Hoofs	Ross Fisher, member **A. S. C.**
East of Broadway	Lucien Andriot
The Lover of Camille	David Abel, member **A. S. C.**
Black Lightning	Jack MacKenzie
Barriers of the Law	Walter Griffin, member **A. S. C.**
The Brass Bowl	Not Credited
The Beloved Brute	L. Wm. O'Connell and Ernest Smith
Oh, Doctor!	Gilbert Warrenton, member **A. S. C.**
Lovers' Lane	H. Lyman Broening, member **A. S. C.**
The Midnight Express	Allen Thompson and Dewey Wrigley
The Greatest Love of All	Not Credited
Classmates	Roy Overbaugh and John Seitz, members **A. S. C.**
The Fast Set	L. Guy Wilky, member **A. S. C.**
That Wild West	Roland Price
Chalk Marks	Jos. Walker

Vol. 5 DECEMBER, 1924 No. 9

American Cinematographer

FOSTER GOSS, *Editor and Business Manager*
Board of Editors—VICTOR MILNER, H. LYMAN BROENING, KARL BROWN, PHILIP H. WHITMAN

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An educational and instructive publication, espousing progress and art in motion picture photography.
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Film Truth *and* Prosperity *in* Advertising

Associated Advertising Clubs Take Hand *to* Combat Fake Promoters Evil.

By Herbert S. Houston
Chairman of Board of Trustees, National Vigilance Committee, Associated Advertising Clubs

Urge Co-operation *to* Weed Out Offenders who Prey *upon* Popularity *of* Films.

(The following story, disseminated by the National Vigilance Committee of the Associated Advertising Clubs, is an example of the work being done to wipe out the activities of the fraudulent motion picture promoters who have found a thriving business in preying upon the credulity of communities in various parts of the country.—Editor's Note.)

The American public is interested in motion pictures. It is more interested in motion pictures perhaps than any industry or any form of entertainment with which it has yet come in contact.

It is so interested in motion pictures that it has come to feel itself a part of them. The closeup and other mechanical agents, the universal human appeal which most writers, actors and directors try to infuse into their productions and the fact that movies every week reach virtually the entire population of the United States, tend to accentuate this familiarity.

The motion picture has become part of the American people. Almost to the extent that the public schools provide their education, the movies provide their entertainment.

Have you ever sat through a motion picture twice? And the second time, instead of watching the screen, have you ever watched the audience?

What you saw on the faces of those people perhaps revealed to you how deeply the "movies" have become woven into American life. As the lovers of the story embraced in the final fadeout, there was not a woman in the audience but felt herself the heroine of the screen. Not a man but felt himself the hero.

Natural Ambition

Nearly all of us at one time or another have wanted to participate in this great American institution of the "movies." For here, either as actor, author or director, lay fame and wealth. And here, too, lay the mysterious machinery which could build dream worlds for us all. Small wonder it was we wanted to learn to operate machinery.

And so, when the doubtful film company promoters, the acting and scenario school agents came along, they found a fertile filed for their efforts.

Stock Sellers

In the stock selling line these promoters, using the confidence which the American people felt in the great motion picture industry as a lever, were able to enlist the support of business men of unquestioned honesty and integrity in many cities.

Sometimes the bait employed was that local talent would be used partly or entirely in the production. No business man with an attractive daughter could be expected to object to aiding her to fame in the motion picture field. Perhaps many of these business men themselves cherished a secret ambition to appear before the camera.

Getting Support

Add to that the fact that the hometown and its attractive environs would be advertised far and wide through the films, and the local business men were more than willing to lend their names and influence to such projects.

No Questions Asked

Often they did not ask for the promoter's credentials, nor for any evidences of his ability to put over such a difficult enterprise. They did not ask him to show them how he would make the pictures nor what arrangements he had made for releasing and distributing them after they had been made.

Perhaps in their great loyalty they felt that anything made by their home people in their home town *must* be of interest to the rest of the world. Their own Sally Green, who was leading woman in the High School Dramatic Club, was another Mary Pickford, while Johnny Burke, who worked in Jenkin's Grocery Store, could think up more ingenious plots than C. Gardner Sullivan or Booth Tarkington.

The Magic

And the same type of people who encouraged the fraudulent stock salesman also encouraged the motion picture scenario and acting schools. Sally Green was convinced that the only difference between her and Mary Pickford was training. No matter how dumb or how awkward Sally was, somebody's course in ten or twenty lessons—for the payment of $50 or $150—would make up for all her shortcomings.

And Johnny Burke's literary and imaginative shortcomings would also be filled by a "Photoplaywright's" course. The cost of the course would be only about $75, and Johnny would receive $1,000 for his first scenario accepted. That net him $925 on his first scenario, which was quite a fair profit.

The Long Chance

The photoplaywright or the dramatic schools, however, did not tell their pupils that hardly one in a thousand of those who took the courses would ever be able to take part in the movies. They did not tell them of the thousands of men and women who daily seek work in Hollywood and who are turned down daily.

The schools tell them only of the handful of successes who make many thousands of dollars a year and whose names are household words in every American home. They say nothing of the failures.

False Advertising

These are but a few forms of advertising reception and fraud in the movies. I mention them first because

(Continued on Page 20)

Jackson J. Rose Picturizes Fantastic Invention

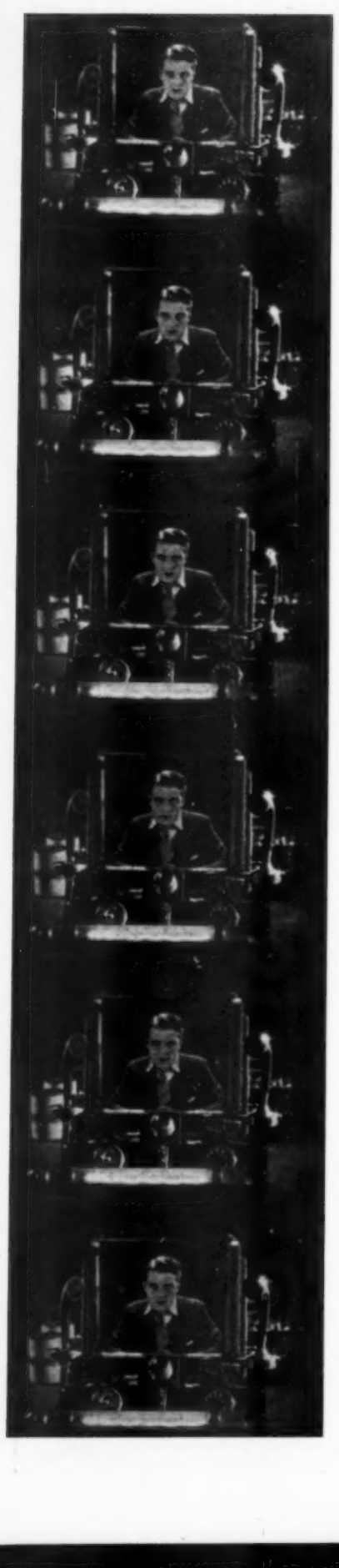
JACKSON J. ROSE, A. S. C.

¶A. S. C. Member Succeeds *in* Working Out Idea *that* Is Basic Theme *of* Universal Jewel Production.

Twelve years ago, Jackson J. Rose, A. S. C., then a cinematographer at the old Essanay studios in Chicago, wrote, more for his own amusement than with any thought that it might be produced as a motion picture, a story bearing the title, "By the Aid of a Mirror-phone."

The story, briefly, contemplated the highly fantastic possibility of one's being able to see the person to whom one spoke over the telephone. In those days, long before radio apparatus had become a part of almost every household, such a theme was indeed very imaginative. Consequently, nothing was done with the story at that time, the producers' being skeptical about the theme's being photographed convincingly. Tricks were not so easily made then as now.

While today such a "visual-talking" arrangement may not be so far removed in the plane



of conjecture, it nevertheless is granted to be more of a probability than a possibility. In fact, a current number of *Science and Invention* offers the prediction that such an invention will, in due course of time, be in as common use as the telephone and the radio are today.

Prediction

But just as authors like Jules Verne and others of bygone days, in sheer imaginative works, hit upon such common accomplishments of the present like like the submarine, etc., motion pictures oftimes evolve mechanically speculative themes which stand just as good a chance to materialize as Verne's undersea boat. Of this sort of motion picture is Universal's "Up the Ladder" which, recently completed, deals with a hero who has invented an arrangement whereby the speaker in a phone may see the person to whom he is talking. By a pure coincidence which he did not discover until he was given the script, Jackson J. Rose was assigned to film this story whose basic idea was strikingly similar to the one that he had hit upon some twelve years ago. The Universal production was directed by Ted Sloman, who was assisted by Tom McNamara, famous cartoonist, who was the "gag man" on the staff.

As difficult as might be the lot of the inventor who is endeavoring to bring the "mirror-phone" into actuality, that's just how difficult it is to make a "dummy" contraption of this sort show up in motion pictures. Of course every one knows that all that would be required of a "mirror-phone" in pictures would be just plain "acting"—for the purpose of fiction it

(Continued on page 22)

The Stills Problem Solved

By H. Gordon Coward

Presents English Perspective *of* American Production Problem.

(Writing from the perspective of English motion picture production, Mr. Coward outlines, in the following contribution a method which he says has solved the problem in England—problem treated upon by Gene Kornman, still photographer r Harold Lloyd productions, in an article, "Solving the Stills oblem," which appeared in the June issue of the AMERICAN INEMATOGRAPHER. *Mr. Kornman's article was in answer to story which appeared in the March, 1924, issue under the ading, "Urge Need for Good Publicity Stills," and, to appreciate the subject with which Mr. Coward deals in the following contribution it should be read in connection with the stories the March and the June issues.—Editor's Note.)*

A belated reply to the very acceptable rticle "Solving the Stills Problem." Although very heartily agreeing with the main oints of the article I fail to see where there a problem that requires solving.

It is admitted that stills are a very important integral branch of cinematography nd essential for publicity. Then why search or a responsible person? The Director is he man to decide what action is to be portrayed and who better than his own cameraman—of whom he knows his limitations and is capabilities—to take them.

When we come down to the photographic ualities of stills we are approaching a different and more difficult matter.

Your excellent contributor states a cameraman needs time for his one job, i. e. cinemaography, and that he cannot serve two masters y mixing this work with stills. I counter his by asking—is not a cameraman a skilled hotographer and does he not contract to hotograph all that is required for a production? Why exclude still work? A good ill requires expert knowledge and I personlly, if a cameraman, would not like this essential part of my work to be delegated to a an engaged solely for this one job.

But to get back to the issue raised, "Solving the Stills Problem". Your contributor ates—add a capable still-man to the staff and ake him responsible for the quality etc. This ounds very well but take a supposition—four five producers all 'shooting' on the studio oor and No. 1 calls "Stills—here." The still an hastens over with his camera and whilst king his picture Producer No. 2 and 3 multaneously cry "Stills." To whom does e go? And when to one, the other is held p. Surely just as much delay here as there ould be if the cameraman were taking his wn stills and re-arranging his lights for the ext scene? Further what of quality if the still-man is harrassed from here to there and back again.

I agree however that a competent photographer be engaged solely to develop and print stills and this brings me to my real issue and that is how stills are dealt with in England and which I think solves the problem.

A competent photographer is engaged with another man and two boys to help him. A section of the Printing Factory attached to the Studio is allotted him comprising, darkrooms, washing rooms, drying room and finishing room. These rooms are fitted up with tanks, dishes, enlargers, contact printing machines, trimming machines, etc. All stills are photographed by the cinematographers engaged and there their responsibility ceases. The undeveloped negatives are sent to the Still Department and here the still-room man—as he is described—steps into his own. He is responsible for developing the negatives handed him and he, of course, has the necessary time to devote to each negative in order to get the best result and further, with the various photographic printing papers provided, obtains the best possible print.

The first prints off are then sent to the Director and cameraman for approval of action and quality and are either approved or cancelled. If approved the print is numbered and copies sent to the publicity agents. From these approved prints stills for the renting houses are chosen and printed in the Still Department.

This system, I feel sure, solves the "Stills Problem" because:

1. The cameraman engaged on a production actually does the photography required.
2. His exposure made, he has nothing further to worry about.
3. The Still Department is in direct touch with both Director and cameraman and publicity agents.
4. This same department handles all prints for 'release' and the cameraman's reputation for quality of work is not risked in the hands of an outside printer.
5. It fixes the responsibility for action on

(Continued on page 23)

Herford T. Cowling Returns to U. S. A.

Back *in* Native Land *after* Absence *of* Two *and* Half Years. Traveled 150,000 Mil

Herford Tynes Cowling, A. S. C., has returned to American soil after his latest trip around the world during which he covered approximately 150,000 miles and exposed 200,000 feet of motion picture film. Cowling, on the trip just ended, was absent from the United States some two years and a half, having left in the summer of 1922. He is at present in Chicago, where are located the headquarters of Round-the-World Travel Pictures, of which organization he is an executive and in the interest of which he took his camera around the globe.

In War in China

Just before leaving for America, Cowling was caught in the midst of the civil war in China where he had gone to carry out the Chinese phases of his cinematographic trip. Since the uprising made this stage of his itinerary impossible, the A. S. C. member turned war cinematographer, visiting the different fronts where he made action shots of the armies of Generals Lu and Chi, and of Marshal Wu.

HERFORD TYNES COWLING, A.S.C.

When General Feng made his coup d'etat, Cowling was in Peking. He lost no time in filming the troops of the "Christian" general as they came into the city with camels as their chief mode of transportation.

Great Journey

The journey just concluded by the A. S. C. member was one of the most exacting ever made by a cinematographe In the initial stages he worke into the jungles and interi of "darkest" Africa where h engaged in the exceeding dangerous undertaking photographing a lion hun These dangers, however, wer matched when Cowling pene trated the jungles of Indi where he turned his camer on a tiger hunt which nette seven Bengals within 24 hours This latter feat is said to b a record. These two event were described in detail b Cowling in his story in th *American Cinematographer*

Interior of Tibet

Cowling was accorded th very rare privilege of goin into the interior of Tib where he was admitted b virtue of a hunter's permi While on this leg of his jou ney he was not allowed visit Lhasa, the capital, he w permitted to attend the var ous religious ceremonials the lamas and succeeded getting motion pictures of th lama dances. These adven ures likewise were describe by Cowling in the *America Cinematographer.*

Motion Picture Apparatus Co. Moves Headquarters *in* New York

The increase in the business of the Motion Picture Apparatus Company's trade with the various branches of the Motion Picture Industry has made it necessary for the organization to concentrate entirely upon the development of that end of its business, and to relieve themselves of the responsibility of their business in still cameras.

In order that the motion picture trade might get the service that it required, and that those whom they served with still cameras would be adequately cared for, the Motion Picture Apparatus Company has moved its quarters to 110 West 32nd Street, New York City, where it will be associated with the well known camera house of Willoughby's.

E. Burton Steene, A. S. C. Returns *to* New York Cit

E. Burton Steene, A. S. C., has departed f New York City after a combined business and pleasu trip of several weeks in Hollywood.

This was the A. S. C. member's first visit to Souther California and his friends are confident that he will back to stay before long. In fact, Steene will not de the probability if questioned, especially after encounterin on his return trip, a howling snowstorm in Chicago th did not compare favorably with the sun-lit boulevar of Hollywood.

* * *

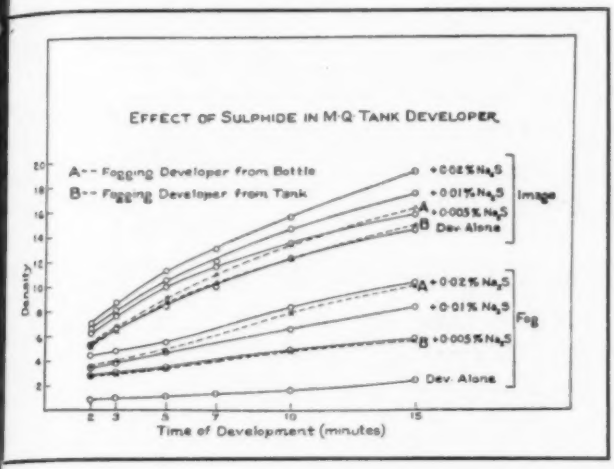
Lloyd Nosler, who cut Fred Niblo's "Thy Name Woman," "The Red Lily" and "The Famous M Fair," has left for Rome to join the Niblo company in t filming of "Ben Hur."

Investigations *on* Photographic Developers

Common Difficulty Sifted *to* Source *to* Find Mischievous Causes.

By Merle L. Dundon and J. I. Crabtree
(Eastman Research Laboratory)

Numerous Theories Investigated, Solved *and* Results Given Herewith.



I. *Facts which led to this Investigation*

1. A tank of MQ developer, used for the development of motion picture negative film, suddenly began to give excessive fog. The developer had been in use for about six weeks in a 65 gallon soap-stone tank but had not developed its normal footage of film (about 500 feet per gallon). The next lot of developer in the same tank gave excessive fog after three week's use when 5,000 feet of film had been developed. The solution smelled badly and the odor of hydrogen sulphide was distinguishable. Further tests, as described later, confirmed the presence of sulphide.

2. A four liter sample of MQ tank developer, which had been in use for one week, and which did not then give fog, had been kept in a closed bottle for about four months. When examined, it was found to give intense fog and to contain sulphide.

3. A tank of No. 16* motion picture positive developer started to fog when two weeks old and only partially exhausted. A sample of this developer was placed in a closed bottle and when examined four months later was found to contain a considerable quantity of sulphide.

4. The same trouble with fog also occurred in a film developing machine where the developer was kept in long glass tubes set in a hard rubber base. The tubes were fastened to the base with a pitch cement around a soft rubber washer. The pitch was tested and found to be free from sulphur. In this case a heavy sludge found in the bottom of the tubes was identified as silver sulphide.

All the developers mentioned above had been used, and the generation of sulphide has not been observed in unused developers. Moreover, in all the above cases the developing solutions had been standing unused for at least two or three days just previous to the time when their fogging action appeared.

*Manufacturers' recommended developer for Eastman Positive Motion Picture Film.

II. *Methods of Detecting Sulphide in Developers*

1. If a drop of lead acetate solution is added to a developer containing sulphide a brownish-black precipitate of lead sulphide is formed. If sulphide is absent a white precipitate of lead carbonate and sulphite is obtained. A sufficiently small amount of lead must be added so that a slight precipitate of lead sulphide will not be hidden by a large amount of white precipitate.

2. A piece of filter paper wet with lead acetate is covered with a black silvery deposit of lead sulphide when exposed to hydrogen sulphide gas. Such a test can be made by hanging a lead acetate paper in the top of the bottle nearly filled with a solution to be tested. When the solution is distinctly alkaline, as with most developers, the amount of hydrogen sulphide which escapes is very small. In such cases it is sometimes necessary to make the solution acid with hydrochloric acid and warm gently, holding the lead acetate paper in the escaping gas.

3. When cadmium chloride is added to a developer, white cadmium hydroxide is formed, but if sulphide is present a yellow precipitate of cadmium sulphide is also obtained. On adding ammonium hydroxide the cadmium hydroxide dissolves leaving a suspension of yellow cadmium sulphide which gradually settles out as a flocculent precipitate. This test is quite sensitive if the developing solution itself is not yellow.

III. *The Concentration of Sulphide and the Extent of Fog*

1. The concentration of sulphide in the fogging developer was determined photographically as follows:

Definite amounts of sodium sulphide were added to samples of a used MQ tank developer and strips of NC film, on part of which a definite exposure was made, were developed in these solutions. The fog on these strips was then compared with that produced by the fogging developer under the same development conditions. The results are shown by the accompanying curves. The upper set of curves represent the growth of image density with time of development while the lower set represent the corresponding fog densities. The dotted lines represent the fogging developers of unknown sulphide concentration. From these curves it is evident that the fogging developer taken from the tank contained sodium sulphide in a concentration of about 0.005 per cent, and that which spoiled in the bottle contained slightly less than 0.02 per cent. Also the magnitude of the fog value show how small a quantity of sulphide is required to produce serious fog.

IV. *Possibile Sources of Sulphur in Developers*

Having established definitely the presence of sulphide in developers, the various possible sources from which it might come were considered and investigated as described below.

1. *Hypo.*

In tank development where wooden racks carrying

(Continued on Page 16)

The Editors' Lens - - - - *focused by* FOSTER GOSS

¶ Fellow cinematographers of Herford Tynes Cowling, A. S. C., are not only glad that he is back in his native land once more, but they are more than happy that his return finds him sound in body and limb despite all the dangerous adventures to which he subjected himself in his last trip around the world.

¶ In the two and one-half years that he was away from the "States" Cowling was exposed to more dangers than the average man meets in a lifetime, and it is well that this passing tribute at least be paid to the courage that guided the grinding arm which made possible the recording of all the varied and interesting subjects that the A. S. C. member has brought back with him.

¶ Cowling required more than skill in such situations when he was attempting, from the back of a nervous and bounding elephant, to keep focused and grinding on a tiger at bay—while at every moment his life was in imminent danger from a shot that might have gone wild because some one's trigger finger was thrown off aim as a result of the antics of a similarly frightened elephant on the other side of the ring. The A. S. C. member spoke little of the element of personal danger in his various stories in this publication but, try as he might, he could not prevent the truth from staring out at the reader between the lines.

¶ But Cowling has more than the great pre-requisite of courage—he has the skill to get into celluloid a graphic display of that which the layman couldn't ever hope to see in personal travels. He needed more than a steady hand and a staunch heart to grind away in the teeth of danger—he had to have the scientific aptitude to preserve the results of his enterprise through the balance of long and perilous journeys, days away from the last outposts of civilization.

¶ With every important release the realization is driven home that the ideal motion picture presentation cannot come to pass until something is accomplished toward bringing projection standards into common reconciliation.

¶ Manufacture of projection equipment has reached a high stage, and the abilities and prestige of projectionists, in whose hands the ultimate screening rests, have similarly progressed.

¶ But what about conditions wherein a print shows ideally in one theatre and when it reaches another house it becomes a monstrosity? For important "key" houses the situation is remedied by giving such establishments prints that will fit their particular requirements—but, in the case of one Los Angeles theatre, the print that is so specially treated can scarcely be seen when an attempt is made to project it at the laboratory at which it is produced.

¶ Those in the producing end of the business naturally wonder, then, what happens to the average print as it passes from one house to another during its life. Those who figured in the making of the picture, when they view it in public, usually see it at some dominating theatre in Los Angeles or in New York City. And, the house being important, and its conditions so requiring, it may be given a special print. So the presentation is satisfactory.

¶ But if conditions vary in Los Angeles as they have been found to do, those who created the vehicle live in justifiable fear as to the form in which their efforts will greet distant audiences, among which they will never sit. It is not to be expected that every theatre should be accorded a print to meet its particular needs or shortcomings. Neither is it to be expected that the laboratory is to turn out a print that will fit into all the widely different requirements of all the houses to which it goes in the course of its career. That would be nothing short of magic.

¶ But it is to be hoped, if not expected, that there will come some solution whereby good cinematography in one house is good cinematography in all houses—yea, whereby a print will not have its life prematurely cut short in its babyhood when, after a run of thirty days in some theatres, it must be given an unhonored burial in the discard.

PHILIP H. WHITMAN, A.S.C.

Manhattan Mutterings

By PHILIP H. WHITMAN, A. S. C.

¶Being mumblings heard by an A. S. C. member in rumbling and rambling about old New York town.

First National Starts

Jimmie Van Trees has started photography on "The Interpreter's House," the first of First National's eastern productions to go in work under the direction of Lambert Hillyer. Scores of workmen are at work upon the remodeling of the old Biograph studios in preparation for the additional production units which are soon to start.

Some Beau Brummel

Arthur Edeson, A. S. C., and also known as the "Sheik of Hollywood," has been seen about town quite a bit recently. The only things missing are the golf trousers and the Roamer Speedster. However, taxicabs are plentiful so that's that. Arthur, by the way, is soon to start one for First National.

"Adventurous Sex" Completed

George Peters has completed photography on "The Adventurous Sex," which was directed by Charlie Giblyn.

Latham Moore Dies

It is with real regret in the heart of the writer that he reports the death in a New York hospital of Latham Moore who assisted Arthur Edeson, A. S. C., during the production of "The Thief of Bagdad." "Late" as he was known to his friends, came east with First National to assist Arthur on a production to be made here. During the journey on the train he was taken suddenly ill and was removed to a hospital immediately upon his arrival here but despite every effort on the part of the medical specialists called in, the end came last week.

For many years Latham was with Universal and was always known as one of the best assistants in the business. He possessed the necessary mechanical and artistic ability to become a high-class cinematographer and many members of the A. S. C. will join in expressing their sorrow for his untimely death.

(Continued on page 15)

Bert Glennon, A. S. C., has left for a location trip of ree weeks to the head of the Grand Canyon, Arizona, here he is to do some interesting work with Zane Grey a forthcoming Paramount production.

* * *

Georges Benoit, A. S. C., having finished filming "The irth of the West," for the Colorado Pictures Corp., s joined Hunt Stromberg productions where he is shoot- a Harry Carey feature with Mildred Harris and om Santschi in the cast.

* * *

Bert Glennon, A. S. C., has renewed his contract ith Famous Players-Lasky for the year 1925. On mpleting "Tomorrow's Love", directed by Paul Bern d featuring Agnes Ayres and Pat O'Malley, Glennon anched out into another line of motion pictures, Para- unt having handed the A. S. C. member one of its ories for a treatment of continuity.

* * *

Reggie Lyons, A. S. C., has finished "The Trail Rid- ", starring Buck Jones for Fox with Nancy Deever as ading lady. Some beautiful scenic stuff was obtained Angels Camp, Calif., where three weeks were spent location.

Reggie followed his avocation on Thanksgiving Day hen he drove his Packard racer in the 250 mile race er the Ascot course, Los Angeles. Lady Luck wasn't gging very hard at Reg's radiator, however, as the S. C. member finished just one position too far back to in the money.

* * *

King D. Gray, A. S. C., has started the cinematography n Ben Verschleiser's production of "Speed", a Satur- ay Evening Post story by Grace S. Mason. Produc- on is under way at the F. B. O. studios with Edward Le Saint directing.

* * *

Photographic circles were stricken with the sad news f the passing of Mrs. George H. Scheibe. The end ame from heart trouble on October 26th. Mrs. Scheibe as actively associated with her husband in his business.

* * *

Max Du Pont, A. S. C., has heeded the call of the tudio and returned to Los Angeles after several months pent in Tahiti where he went to rest and recuperate.

* * *

Ira Morgan, A. S. C., likewise has returned from the ame island where he sailed for the filming of his latest Cosmopolitan production. With Max and Ira, the South Seas claimed a fair representation of A. S. C. members or some time.

* * *

Al Gilks, A. S. C., is back in Hollywood wearing a Texas sunburn acquired in the filming of Paramount's production of Emerson Hough's "North of 36", direct- d by Irvin Willat. Al has seen so much of cattle the past several weeks that he cannot be sympathetic to even nice juicy beefsteak.

Tony Gaudio, A. S. C., is shooting a star other than Norma Talmadge for the first time in many moons. Through special arrangement with Joseph M. Schenck, he is filming "Declasse," a Corinne Griffith production, during the vacation of Miss Talmadge.

* * *

Fred and Floyd Jackman, both A. S. C. members, who are away on an Arizona location, have been having their troubles brought on by temperament among their players—namely through the bad offices of the steed that was scheduled to play the "heavy" opposite "Rex", in the latest Fred Jackman Production for Hal Roach.

* * *

Robert Kurrle, A. S. C., has begun the cinematography on Henry King's latest production. Headquarters will be at the United Studios.

* * *

Victor Milner, A. S. C., is nearing the end in the filming of Paramount's "East of Suez," starring Pola Negri and directed by R. A. Walsh.

* * *

Sol Polito, A. S. C., called in H. Lyman Broening, A. S. C., recently for aid in the filming of a big set in the latest Hunt Stromberg production which Sol is photographing.

* * *

Charles Rosher, A. S. C., has returned to Hollywood after a sojourn in Europe of several months, much of which was spent studying photographic conditions in Germany.

* * *

Homer Scott, A. S. C., is as busy as ever on the intricate phases of "The Lost World", First National's big production.

* * *

Arthur Edeson, A. S. C., has gone to New York City for the filming of his latest productions for First National.

* * *

Bert Glennon, A. S. C., an aviator during the World War, went back to his war-time love during the past month when, on the completion of the cinematography in Paul Bern's production of "Tomorrow's Love" featuring Pat O'Malley and Agnes Ayres, he filmed a battle between a German and a French plane, done at Clover Field, Santa Monica, Calif.

Glennon's knowledge of direction and his experience as an aviator inspired the confidence of Clarence Badger, who was directing "Old Lives for New," and, as a result, Paramount entrusted the entire episode to the A. S. C. member's imagination. The results seen on the screen are very realistic, and will bring back memories of exciting moments to those who fought in planes, at the same time thrilling the spectators who view the finished production.

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MANHATTAN MUTTERINGS

(Continued from page 12)

Marcel Le Picard has finished photography on "The Ultimate Good" which was directed by E. H. Griffith for St. Regis productions. By the way one never sees Marcel around the bright lights but then he always was good at hiding out. Ne cest pas?

Rudy Bergquist Back

Rudolph Bergquist has returned from the west coast to take up the photographic reins on "Hail and Farewell," Barbara La Marr's next one. As yet no director has been selected.

Overbaugh Starts

Roy Overbaugh has started the photographic end of "New Toys," Richard Barthelmess' latest, which will be directed by John Robertson. Work will be done at the Tech Art Studios.

Flying Fists Finish Flying

Frank Zucker has finished up the photographic work on "Flying Fists," which featured Benny Leonard. The series of short features were made by the Ginsberg-Wilk productions.

Another New One

J. Schultz has commenced the camera work on "The Great Air Mail Robbery," which is being directed by T. Hays Hunter.

Griffith Done

Hendrick Sartov has just put the finishing photographic touches on "Isn't Love Wonderful," the latest D. W. Griffith production. The exteriors were made abroad while the interiors were completed at the Mamaroneck Studios.

(Continued on page 21)

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YOU can give to yourself at Christmas time, and yet be as unselfish and as charitable as you like to be. Buy Christmas Seals.

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THE NATIONAL, STATE, AND LOCAL TUBERCULOSIS ASSOCIATIONS OF THE UNITED STATES

INVESTIGATIONS ON PHOTOGRAPHIC DEVELOPERS

(Continued from page 9)

film are passed repeatedly through the developer, fixing bath, and wash tanks, it is possible that traces of hypo might be carried into the developer as a result of incomplete washing of the racks. With this in mind a small wooden frame was soaked in a fixing bath, and without rinsing was dried for two days, and then soaked in a liter of developer in a small tank for three days. This developer was then tested and found to give some dichroic fog which has a different appearance from fog caused by sulphide. Moreover, no sulphide could be detected by chemical tests. When hypo in increasing amounts was added directly to a fresh developer, the general result was to decrease the density of the image without producing any increase in fog. Dichroic fog was formed in only a few cases. From these tests it seems improbable that traces of hypo in a developer can form sulphide by chemical decomposition.

2. *Rubber.*

Rubber bands are used to fasten the ends of strips of film to the racks for tank development, and in the tube machine mentioned a soft rubber washer and hard rubber base were in contact with the developer. Therefore, a handful of new rubber bands were placed in a 250cc. bottle of developer and allowed to stand 24 hours at a temperature of 120°F. Another sample of developer was heated to boiling with rubber bands. In both these tests no excessive fog was produced and sulphide could not be detected. When rubber was heated with 10% sodium hydroxide alone, sodium sulphide was formed, but when heated with sodium hydroxide and sodium sulphite, hypo was formed instead of sulphide. The same result was obtained with developer which contained sulphite.

3. *Free Sulphur.*

Flowers of sulphur were added to a developer and tested, as with the rubber bands, by boiling and by keeping for 24 hours at 120°F. Solutions were then filtered and tested chemically and photographically but no sulphide could be detected. However, so much hypo was formed that, after a strip of film had been developed in the solution kept for 24 hours at 120°F., a silver mirror was slowly formed on the walls of the glass tube containing the developer. This was due to reduction of the silver dissolved from the emulsion. The solution also had a muddy appearance from the precipitated silver. Similar tests were carried out with milk sulphur made by acidifying a hypo solution. In all these tests the results were the same; no sulphide was formed in a developer by adding hypo, rubber which contains sulphur, or free sulphur. On the other hand, when free sulphur was added to a developer, either hypo or some other poly-thio salt which dissolves silver bromide, was formed.

4. *Decomposition of Gelatine.*

When film is passed through a developer a small amount of gelatine dissolves in the solution. Ordinary gelatine may contain cystine as one of its constituent amino acids and cystine contains sulphur in organic combination. Moreover, cystine is quite soluble in alkalies. It was thought therefore, that if the gelatine in the emulsions contained traces of cystine this might get into the developer and be decomposed with the formation of sulphides. In order to test this possibility some pure cystine was added to a developer, both alone and with ordinary gelatine, and the solutions kept for several days at 120°F. The same test was also made at 90°F. No sulphide was detected in any of these solutions. It is known that the bacterial fermentation of protein bodies containing sulphur produces hydrogen sulphide and in these tests it is probable that conditions favorable to bacterial development were not present, although the solutions were inocculated from the fogging developer. Moreover, it seems improbable that sufficient cystine could get into a developer from photographic gelatine to account for the formation of sulphide in the concentrations found to exist. In considering the activities of bacteria and other organisms, however, a much more probable source of the sulphide was found.

V. *The Reduction of Sodium Thiosulphate, Sulphite, and Sulphate by Bacteria, Moulds and Yeasts*

1. *Literature.*

The literature contains references to the reduction of thiosulphates, sulphites, and sulphates by many different organisms. Neuberg and Welde[1] found that with a mixture of sodium thiosulphate, sugar and yeast, hydrogen sulphide and sodium sulphite were formed, and in three days 15% of the theoretical yield of hydrogen sulphide was obtained. Tanner[2] studied the action of thirty different fungi and found that most of the strains liberated hydrogen sulphide from sodium thiosulphate. Ten were found to reduce sodium sulphate to hydrogen sulphide and a few reduced sodium sulphite. W. J. Wilson[3] found that in media containing sodium sulphite, glucose and iron salts, reducion of sulphite to sulphide is effected by B. typhosus, B. enteritidis, B. paratyphosus B., and other members of the Salmonela group. These examples are sufficient to indicate the great variety of organisms which are capable of reducing sulphites, or even sulphates to hydrogen sulphide. It is also of interest to note that a rapid deterioration of standard solutions of thiosulphate has been traced to bacterial action[4].

2. *Experimental Investigation.*

In order to confirm the theory that reducing organisms were responsible for the formation of hydrogen sulphide in the fogging of developer, it was necessary to reproduce the effect in other samples of developer. For most tests the solution to be tested was placed in a 250cc. bottle, the desired culture material added, and the sample kept in an oven at 90—95°F. The bottles were not quite full and were corked. In some cases the solution itself was tested, but generally a lead acetate paper was suspended in the top of the bottle and left for an hour or two, if necessary, to see if it would blacken. At first some of the tests gave negative results, but this was probably due to the fact that the bottles were opened too frequently for examination and, as will be shown later, the absence of oxygen is a contributing factor in the formation of sulphide.

---

1. Neuberg and Welde, Transformation of Thiosulphate into Hydrogen Sulphite by Yeast, Bio-chem. Z *67*, 111, 1914).
2. Fred W. Tanner, Formation of Hydrogen Sulphide from Certain Sulphur Compounds by Yeast-like Fungi. Am. Chem. Soc. *40,663*, (1918).
3. W. J. Wilson, Reduction of Sulphites by Certain Bacteria and Media Containing a Fermentable Carbohydrate and Metallic Salts. J. Hyg. *21*, 392, (1923).
4. Kilpatrick and Kilpatrick, The Stability of Sodium Thiosulphate Solutions, J. Am. Chem. Soc. *45*, 2132, (1923).

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(a) *Experiments with Yeast.*

In the experiments with yeast about 1cc. of ordinary baker's fresh yeast was placed in a 250cc bottle of the solution to be tested. When yeast was added to a 1% solution of sodium thiosulphate a considerable yield of sulphide was obtained in less than 24 hours. With a 1% solution of sodium sulphite, sulphide was detected after four or five days. When MQ tank developer was diluted 1 to 3, and 0.25% hypo added with yeast, sulphide was invariably produced in 3 to 5 days. Finally, when yeast alone was added to a slightly used tank developer, and the bottle kept closed for a week, sulphide was detected in considerable concentration. Thus there is no doubt whatever that ordinary baker's yeast contains organisms which are capable of living in a developer and producing sulphide from the developer constituents.

(b) *Experiments with Slime.*

The wooden wash tanks in which the motion picture film is washed after fixing becomes coated with a thin layer of slime if they are not cleaned frequently. Some of the slime was scraped off and kept in a bottle from which portions were taken and added to other solutions. The bottle containing slime was partly filled with water from the tap and after keeping a few days a lead acetate paper blackened instantly when introduced into the top of the bottle. In this case the sulphide must have been produced from traces of sulphate in the tap water, or hypo from the water in the wash tank from which the slime was scraped. Sulphate was formed very slowly and in small amounts when slime was added to hypo solutions or to dilute developers containing hypo. However, when some of the slime was added to slightly used developer and the bottle kept tightly closed for two weeks, a large amount of sulphide was formed. Therefore, the slime which collected on the walls of the wash tanks was capable of producing sulphide in a developer.

(c) *Bacteriological Examination of the Developer.*

A sample of the fogging developer from the tank after standing for some time was examined microscopically* and found to contain numerous organisms, some of which were undoubtedly dead. The turbidity of the contaminated samples appeared to be caused largely by the suspended organisms.

A second sample obtained from the tank just as the first trace of fog became evident showed much the same bacterial flora as the first. This consisted chiefly of bacteria, bacilli predominating, although cocci were present. Under anaerobic conditions in a medium of diluted developer to which peptone and lead acetate had been added hydrogen sulphide was produced on at least three occasions. It is not certain yet which one of the mixtures of micro-organisms yielded the hydrogen sulphide nor can the peptone be ruled out as the source of it.

In view of all the experimental evidence produced, it seems certain that the sulphide in the fogging developers tested was formed from sulphite as the result of reduction by living organisms which grew in the developer. The organisms were probably introduced with the water, but may have come from the air. A deep tank favors such growth because oxygen cannot penetrate to the bottom of

*The authors are indebted to Dr. R. R. Mellon and Dr. W. S. Hastings of the Pathological Laboratory, Highland Hospital, Rochester, New York for the bacteriological examination.

solution where anaerobic conditions would exist. Possibly gelatine dissolved from the film acts as food for the organisms.

VI. *Prevention of Fog*

1. *The Precipitation of Sodium Sulphide from Developers.*

(a) *Precipitation by Silver Dissolved from Emulsions.*

When a developer is used continuously no trouble is liable to occur from sulphide fog, because the silver dissolved from the emulsion precipitates the sulphide as fast as it is formed. This accounts for the sludge of silver sulphide sometimes found in such a developer. However, when sulphide is being formed continually, and the developer is not used for a day or two, all the silver is precipitated and the excess sulphide fogs the next film which is developed. This is why the fogging tendency appears so suddenly in such a developer. Further, it was found that by developing some film in the fogging developer, the excess sulphide was removed and the fogging tendency disappeared.

In this connection it is of interest to know the solvent power of a developer for the silver halides in the emulsions. The solubility of silver for the silver bromide in solutions of sodium sulphite was determined by Mees and Piper[5], but when a film emulsion is passed through a developer other factors are present. Also, the silver halide first dissolved is reduced by the developing agent to free silver, either in a colloidal or a precipitated form. In the colloidal form it is partly responsible for the color of used developer solutions, and as a precipitate it forms a part of the black sludge sometimes found in the bottom of a tank of old developer. For example, the sludge which settled out of a tank of old No. 16 motion picture positive developer was found to contain 13.6% silver. In order, therefore, to determine approximately the solvent power of a developer for the silver halides in emulsions, the following procedure was followed:

A solution was made up containing sodium sulphite, sodium carbonate and potassium bromide in the same concentration as in a developer but no reducing agent was added. 500cc. of the solution was placed in a tray and 12 sheets of film, 8 inches by 12 inches, were put through the solution. Six sheets were developed at a time shifting the sheets from the bottom to the top of the pile constantly for ten minutes. The solution was then allowed to stand over night so that the turbid matter settled out and the clear liquid was pipetted off for analysis.

In order to determine the concentration of silver in the solution, sodium sulphide was added and the turbidity caused by the silver sulphide was compared in a colorimeter with the turbidity produced under similar conditions by a solution of known silver content. The solution of known content was prepared from the same stock solution of sulphite, carbonate, and bromide by agitating a sheet of clear photographic gelatine for ten minutes, and allowing that solution also to settle over night. This procedure was necessary in order that the gelatine content might be similar to that of the solution to be tested, for the protective colloid effect of the gelatine had considerable influence on the state of division of the precipitated silver sulphide. For the comparison

5. Mees and Piper, Suplhite Fog and Solubility of Silver Bromide in Sulphite Solutions, Phot. ourn. *36*, 221, (1912).

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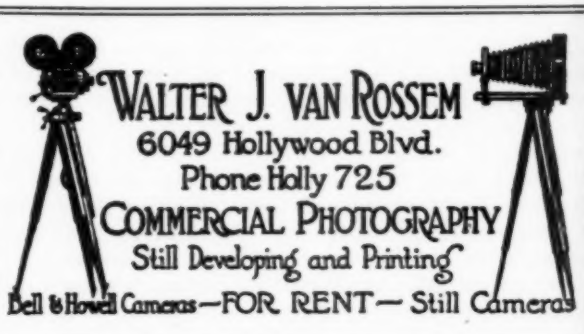

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10cc. of each solution was used. A measured amount of one-hundredth normal silver nitrate was added to the solution containing only gelatine, and the same amount of water to the solutions to be analyzed. 1cc. of 1% sodium sulphide was added to each and the comparison made. By a few trials the amount of silver nitrate required to give the same turbidity in each case was found. The results calculated in terms of silver bromide are given in Table I. These figures, while not extremely accurate, are sufficient to show that the developing solutions are capable of dissolving a measurable amount of silver from the emulsions during development.

TABLE I.

Solvent Power of Developing Solutions for Silver Halides

Developer Formula	Composition* of Solution in grams per liter Na_2CO_3	Na_2SO_3	KBr	Emulsion	Equivalent of Silver Bromide per liter
	grams	grams	grams		grams
MQ tank	12.5	18.75	0.75	Eastman Motion Picture Negative Film	0.17
MQ tank	12.5	18.75	0.75	Eastman Motion Picture Positive Film	0.19
MQ tank	12.5	18.75	0.75	Eastman Brilliant Velvet Bromide Paper	0.21
MQ tank	12.5	18.75	0.75	Azo E No. 1 Developing Paper	0.60
MQ 25	25	75	1.5	Eastman Motion Picture Negative Film	0.15
MQ 25	25	75	1.5	Eastman Motion Picture Positive Film	0.15
MX	100	100	3.75	Eastman Motion Picture Negative Film	0.56

*Reducing agents were omitted from the solutions.

The effect of soluble bromide in diminishing the solubility of silver bromide is shown by the smaller value obtained with MQ25, which contains much more sulphite than MQ Tank, but more potassium bromide.

(b) *Precipitation by Lead Acetate or Silver Nitrate.* When a small amount of lead acetate was added to the fogging developer containing sulphide, it was precipitated out so completely that the developer again gave entirely satisfactory results. The precipitated lead sulphide settled out quite rapidly but even while in suspension it caused no trouble in development. With a developer which contained 0.01% sodium sulphide, it was found that when 0.05% of lead acetate was added and mixed thoroughly with the developer, all the sulphide was removed. Any excess of lead salt forms a white precipitate which is probably a basic lead carbonate with possibly some sulphate or sulphite. It can easily be determined when sufficient lead salt has been added by observing whether further additions produce a white precipitate instead of a dark one. The solution must be thoroughly mixed and the first dark precipitate removed by settling or by filtering a small sample before making this test. A large excess of lead salt is objectionable because it removes from the solution some of the necessary carbonate or sulphite. The precipitation takes place most favorably if a comparatively dilute solution of the lead salt, for example, about 10%, is stirred in slowly. In most cases, not more than 0.5 gram of lead acetate crystals per liter should be required.

When silver nitrate was added in order to precipitate sulphide from a developer, the results were not very satisfactory. The reduction of the silver interferes with the rapid precipitation of silver sulphide, and the precipitate settles much more slowly than that of lead sulphide. Moreover, the developers to which silver nitrate had been added showed a tendency to produce a spotted dichroic fog which looked as though it had been picked up from the surface of the solution. It appears, therefore, that the most satisfactory way of removing sulphide from a developer is to stir in thoroughly a small quantity of a solution of lead acetate which precipitates lead sulphide.

2. *Attempts to Prevent the Growth of Yeast.*

A series of solutions containing 1% thiosulphate and yeast were tested with various preservatives to see if the growth could be prevented. The substances added were phenol, 0.1% and 5%; thymol, sodium salicylate, 0.5% and 5%; formalin, 0.1% and 0.5%. Sulphide was formed in all these tests except with formalin.

When MQ tank developer was diluted 1 to 3 and 0.25% thiosulphate added together with yeast, sulphide was always formed. With this solution it was found that the addition of sodium salicylate in a concentration of 0.1% and 0.5% accelerated the formation of sulphide, while formalin in concentrations of 0.1% and 0.2% only acted as a retarding agent. Probably the sulphite in the developer combines with the formalin rendering it ineffective. In these tests, therefore, no substance was found which would prevent the growth of yeast in a developer. If the formation of sulphide is caused by some other type of organism perhaps it could be prevented more easily. At this time, however, the authors are unable to recommend any substance which can be added to a developer to prevent such growth. In case a tank of developer becomes affected, it should be thoroughly cleaned before a new batch is added in order to prevent infection from the tank.

While the difficulties described in this paper arose with motion picture developers, these solutions are essentially the same as developers used in any other branch of photography. In motion picture work developers are used in large quantities and are frequently kept in tanks for several weeks. Such conditions are especially favorable to bacterial growth. However, the same phenomena may occur in any case where developers in either large or small quantities are kept after being used. Although the authors have not observed the bacterial formation of sulphide in unused developers, such an occurrence is not impossible.

SUMMARY

1. Several samples of tank developer which suddenly began to give excessive fog were found to contain sodium sulphide.

2. The concentration of sodium sulphide in two of the fogging developers was determined photographically and found to be approximately 0.005% and 0.02% respectively.

3. When free sulphur was added to a developer, sodium thiosulphate or other poly-thio salts were formed but no sulphide could be detected. The formation of sulphide from thiosulphate or rubber in a developer is, therefore, improbable.

4. Many different organisms are capable of reducing hypo, sodium sulphite, and sodium sulphate to sodium sulphide. Certain unidentified fungi and several species of bacteria, some of them chromogenic, were found living in the fogging developer.

5. The formation of sulphide in developers was reproduced experimentally in the laboratory by adding yeast or slime. The evidence, therefore, indicates that the sulphide in the fogging developers investigated was formed by reduction of the sulphite by living organisms.

6. When a developer is used continuously, the dis-

(Continued on page 23)

5. J. I. Crabtree, The Development of Motion Picture Film by the Reel and Tank System. Trans. Soc. M. P. Eng., No. 16, 163, (1923).

FILM TRUTH AND PROSPERITY

(Continued from page 4)

they are most directly associated with the public. But there are many others. One of these is plagarism in the use of titles.

The most recent of this type, perhaps, was disclosed in September through the investigation by the National Vigilance Committee of the Associated Advertising Clubs, in co-operation with the Motion Picture Producers and Distributors of America, Inc., into the efforts of a certain company to use "Moses and the Ten Commandments" in connection with the advertising of their picture, "Six Days." This, the Committee held, infringed upon the title of the Famous Players-Lasky production, "The Ten Commandments." And this opinion was sustained by Referee Robert L. Luce of the New York Supreme Court.

Similar frauds along this line which have been exposed by the Committee, were those of the old "D'Artagnan" film, the title of which was changed to "The Three Musketeers" to coincide with the Douglas Fairbanks release, and of a foreign production of the "Two Orphans" to coincide with the advertising of the Griffith picture of that name.

An old release of "Ten Nights in a Bar Room" was used in this manner.

Questionable advertisments for "partners," "extras" and others, usually where the applicant must make a deposit have also been weeded out. One man collected $40,000 through help wanted advertisements.

In Indiana

One of the most recent instances of advertising fraud halted by the Vigilance Committee was in Bicknell, Indiana, in October, where a certain promoter is said to have endeavored to produce a local picture to be called "The Darling of Bicknell," without the approval of the Advertising Committee.

The promoter is alleged to have ordered a double page spread in a daily paper and sold spaces in this spread for $25 and $35 which was to include the right of making a few feet of pictures of the merchant's store. Each merchant after the showing of the picture was to receive that part of the picture pertaining to his store. The spread was not printed, due to the fact that the promoter was asked to pay for it in advance.

The promoter also secured applicants for the motion picture cast, collected the money from the subscribing merchants and before the first rehearsal was to be held, left town.

These are but a few examples of the kinds of frauds and deceptions with which the National Vigilance Committee of the Associated Advertising Clubs and forty local Better Business Bureaus have had to deal.

And all such irregularities in the motion picture field are but a few in contrast with the very great amount of honest transactions.

The Vigilance Committee has a greater purpose than merely to expose fraud. It has a greater purpose than to secure the arrest of a few short-sighted individuals. Its purpose is to protect the motion picture industry and its $1,500,000,000 investment from the tampering of these few.

Its purpose is to protect the public confidence in the motion picture industry. A contrast of conditions to-day

(Continued on page 23)

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MANHATTAN MUTTERINGS–

(Continued from page 15)

Famous Players Notes

Faxon Dean has finished his first eastern production and is starting a new one with Tommy Meighan. The title will be "Bed Rock," and the direction will be in the hands of Eddie Sutherland. Faxon will go to Alabama on this one as a great number of scenes are laid in the coal mining region of Birmingham. I wonder if they still have their 24 votes for Underwood down there.

* * *

Al Wyckoff is still busily engaged on "The Swan," under the direction of Mr. Buchowetski. Al has had any number of big sets in this one and all have been well handled.

* * *

Hal Rosson is between pictures at present but expects to start one soon with director Paul Sloan.

* * *

Roy Hunt is photographing "Miss Bluebird" for Director Frank Tuttle. The production is well under way.

* * *

Al Ligouri is still busily at it with Director Sidney Olcott on "Salome of the Tenements," production about two-thirds the way thrugh.

All of which goes to show that things photographically are more or less humming in "Lil Old New York" and as far as the writer is concerned he is busy as——.

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JACKSON J. ROSE PICTURIZES FANTASTIC INVENTION

(Continued from page 6)

could go without question as an acceptable "fake." *But the creation of that fake involved just as perplexing a photographic problem as is brought forth in an attempt to work out the actual invention itself.*

Benny Zeidman, assistant general manager at Universal City, stipulated that it couldn't be expected that the invention be worked out so that it would appear as the real thing on the screen. Jackson Rose, however, thought otherwise. He believed the thing could be done without resorting to dramatic suggestion, as in the old days when all that the audience could see of the picture that the artist was painting was the back of the canvas.

Much Experiment

Both Rose and Ted Sloman, who directed the production, are ardent radio fans, and they worked hard on the idea before they accomplished the design decided upon. They realized that the model should look something like a radio and phone cabinet combined, and many models were constructed and discarded before the final one was adopted.

Kull Aids

All of the experiments were done at night, Rose having had the co-operation of Edward Kull, A. S. C., who helped design a special prismatic filter which was used in the device.

Rose did not unfold his plans until his cinematographic results had an opportunity to talk for themselves in the projection room. Naturally, Zeidman was surprised. Rose's presentation of the fantastic invention could not have been more realistic if an actual invention of this sort had been photographed in operation. The story was driven home with a sincerity that could hardly have been expected otherwise. By the thorough direction of Sloman, every time Forrest Stanley, as the hero-inventor, spoke to Virginia Valli, the heroine, or other members of the cast, which included George Fawcett, Holmes Herbert, Margaret Livingston, and William Mong, the countenances of the player spoken to looked out at the audience from the absolute confines of the prismatic reflectors attached to the phone. So perfect is the synchronization that the image in the prisms can be switched as rapidly as another character speaks into the mouthpiece on the sending end of the apparatus. The accompanying illustrations which are taken from Rose's negative show, with allowances for the loss of detail due to the process of reproduction, the outcome of the A. S. C. member's achievement. The characters in the illustration are Forrest Stanley and Virginia Valli.

PLEASE

REMEMBER

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Rene Guissart, A.S.C. on Big "Ben Hur" Job

Has Wide Experience *in* European Cinematography. Photographed "Chu Chin Chow."

Word has been received from Rome that Rene Guissart, A. S. C., has been made chief cinematographer of the Metro-Goldwyn-Mayer production, "Ben Hur," which is being directed in Italy by Fred Niblo.

Guissart left Los Angeles sometime ago for the Italian capital, his assignment then being chief cinematographer for Technicolor on the color phases in the production.

European Experience

Guissart's new appointment makes him have charge of both color and black-and-white photography on "Ben Hur." The A. S. C. member has had widespread experience in European cinematographic matters, having spent, prior to 1923, several years in filming in Great Brittain and on the continent, his headquarters having been in London. It was during this period that he photographed "Chu Chin Chow" which, announced as one of the biggest production ever made across the Atlantic, is to be distributed in this country by Metro-Goldwyn.

RENE GUISSART, A. S. C.

Many Trips

Subsequent to filming "Chu Chin Chow," which was made in Berlin, Guissart returned to the United States. He had, however, been in Hollywood but a short time when he was engaged to return to Europe to shoot J. Parker Read's production of Rex Beach's "Recoil," directed by T. Hayes Hunter and featuring Betty Blythe and Mahlon Hamilton. Guissart photographed this vehicle in France and at Monte Carlo.

He again returned to Hollywood on the completion of the Read feature, but had not been there a great while when once again he was Europe-bound, this time for his engagement on "Ben Hur."

THE STILLS PROBLEM SOLVED

(Continued from page 7)

the Director and quality on the stillman.

All things considered this article does not greatly differ from that in your June issue of the *American Cinematographer,* but it does fix the responsibility of stills; shows that time is not saved by engaging another photographer to take stills, and I think demonstrates the only ideal way for still work.

INVESTIGATIONS ON PHOTOGRAPHIC DEVELOPERS

(Continued from page 19)

olved silver precipitates the sulphide as fast as it is ormed and no fog is produced. In this connection, he solvent power of the developing solutions for the ilver halides in various emulsions was measured.

7. A developer which gives sulphide fog can be revived by the addition of a small quantity of lead acetate which precipitates the sulphide as lead sulphide, or by developing a quantity of waste film therein. About 0.5 grams of crystallized lead acetate per liter of solution should be sufficient in most cases.

8. No substance has yet been found which can be recommended as a preservative against bacterial growth in a developer.

FILM TRUTH AND PROSPERITY

(Continued from page 20)

with those of only a year ago will show that it is protecting that confidence. And in this work it has the support of all the far-sighted and honest men and women in the industry.

Through the efforts of all of these, the time is not far off when the motion picture industry will stand purged of these contaminating few. It will stand in all respects worthy of the public confidence which will be placed in it.

Box office receipts will reflect—indeed they are already reflecting—that confidence.

A. S. C. Acquires Another Office *in* Guaranty Building

To take care of the future growth of the American Society of Cinematographers and of the *American Cinematographer,* A. S. C. members have purchased another office adjoining the new A. S. C. headquarters in the new Guaranty Building, Hollywood.

The Society will immediately go into occupancy of the new office which will be used as the business office of the Society and of the *American Cinematographer.*

Big Investment

This latest acquisition in what is said to be Los Angeles' and Hollywood's finest office building, brings the investment of the A. S. C. members in the structure in the vicinity of $30,000.

Dominating Location

The location of the A. S. C. headquarters is now made more dominating than ever, located as they are on the top floor of the building. The offices offer a view stretching from the mountains to the sea.

Scott in Charge

Arrangements for the purchase of the new office were in the hands of Homer Scott, A. S. C., and in those of Mr. Hamilton for the Guaranty organization.

The Duplex Co., who have for many years manufactured equipment for the production of motion pictures, are extending their business and have equipped a new and modern plant at Long Island City, it is announced.

Shortly one of the world's finest and biggest motion picture laboratory will be installed here, and the "Project - A - Graph"—a home, business and educational motion picture outfit, will be manufactured. To take care of the many technical problems and conduct research in new developments, Duplex have secured the services of Dr. Alfred B. Hitchins, one of the best known authorities on photographic science. Dr. Hitchins is a Fellow of the Royal Photographic Society, Fellow of the Chemical Society, Fellow of the Royal Microscopical Society—Fellow of the Physical Society, London, a member of the Society of Motion Picture Engineers, being one of the Board of Governors, member of the Society of Francaise de Photographie and a medallist of the society, a member of the Camera Club, New York, the Franklin Institute and the American Institute of Graphic Arts. Dr. Hitchins was for nine years Director of Research with the Ansco Co. He has made a life study of the chemistry, physics and optics of photography and its applications, and has specialized in the problems connected with the production of motion pictures, from the making of raw stock to the picture on the screen.

FAREWELL AND HELLO!

Many years and many calls firmly established the former A. S. C. telephone number, Hollywood 4404. But now this number is no more. It has been usurped by—

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The king is dead, long live the king —but don't forget the new number.

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With them a Moment In Front of the Camera

Sol Polito, A. S. C., who is re-istering 100 per cent cinemato-raphy with Hunt Stromberg pro-uctions. Priscilla Dean and Harry Carey are the stars on whom Sol is training his camera hese days.

H. Lyman Broening, A. S. C., who is photographing the latest Erb production at F. B. O. studios. It was Lyman and Bob Kurrle who were the cinematographers of that great production, "Abraham Lincoln."

Charles Rosher, A. S. C., who returned to Hollywod after a sojourn of several months in Great Britain and on the continent. Rosher studied cinematographic conditions minutely, especially in Germany.

Robert Kurrle, A. S. C., who is lming Henry King's latest. Some f the biggest current releases, hose made by Edwin Carewe, ame into existence through the edium of Bob's camera.

Max Du Pont, A. S. C., who is back in the fold after basking under Tahiti's warm skies for half a year. Max gathered unto himself a rest long needed and has a cranking arm rarin' to go.

John M. Nickolaus, a veteran friend of the cinematographer, who, with the passing of the Standard Film Laboratories, assumed charge of the laboratory at Metro-Goldwyn-Mayer studios.

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Van Enger, Charles—with Universal.
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Whitman, Philip H.—with Famous Players-Lasky, New York City.
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Meetings of the American Society of Cinematographers are held every Monday evening. On the first and the third Monday of each month the open meeting is held; and on the second and the fourth, the meeting of the Board of Governors.

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What I have often said before, I do so because the work when I write to you today repeating turned out by the Mitchell camera in my latest production "FORBIDDEN PARADISE", which I am just cutting, pleases me to such a degree that I feel I should tell you about it. I can only reiterate: the speed, the ease, and the accuracy with which the Mitchell Camera works and its numerous special features which enable the cameraman to achieve the most unusual effects, put your camera in a class by itself.

Yours very sincerely,

Ernst Lubitsch

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